REMARKS

Various typographical errors in the specification have been corrected.

A modification to page 212 which exemplifies subject matter previously described has been added for clarification purposes, as readily contemplated by a person with ordinary skill in the art.

A new claim 16 has been added.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Specification:

Page 175, line 9 has been amended as follows: --from the tag, by a simple dedicated 1×1 switching circuitry which is appended to every--.

Page 177, line 13 has been amended as follows: --10 ('0-bound') ≺ 00 ('idle'θ) ≺ 11 ('1-bound').--.

Page 179, line 18 has been amended as follows: --of a bit-permuting network. The ~~guide of~~ routing tag for the particular $2^n \times 2^n$ networks studied in the prior--.

Page 180, line 1 has been amended as follows: --art is the destination address $d_1 d_2 \ldots d_n$ of a packet plus possibly an activity bit up front. By--.

Page 195, line 13 has been amended as follows: --possible number of 1-bound signals to the 1-output group. For a 2b-to-b concentrator ~~is~~--.

Page 195, line 17 has been amended as follows: --concentrator ~~is~~ composed of interconnected routing cells meets this criterion perfectly for--.

Page 196, line 4 has been amended as follows: --banyan-type network. The 2b-to-b concentrator ~~is~~ composed of interconnected routing--.

Page 196, lines 15-16 have been amended as follows: --concentrator ~~is~~ composed of interconnected routing cells can be substituted by a 2b-to-b concentrator ~~is~~ composed of interconnected 0-1 sorting cells. The same applies throughout --.

Page 197, line 10 has been amended as follows: --a 2b-to-b concentrator ~~is~~ composed of interconnected routing cells. The hybrid network--.

Page 197, line 13 has been amended as follows: --of routing cells, and the in-band control signals of a packet changes only between--.

Page 198, line 5 has been amended as follows: --for $1 \leq j \leq n$, ~~and~~ the in-band control signal to a concentrator in the j^{th} super-stage is $1d_{\gamma(j)}$.--.

Page 200, line 8 has been amended as follows: --A concentrator ~~is~~ composed of interconnected routing cells is a--.

Page 206, line 13 has been amended as follows: --100101, 100111, 101101, and 101111, so this is a ~~2~~3-dimentional rectangle. The number of--.

Page 210, line 2 has been amended as follows: --$p_1 \ldots p_r$ serves as the tiebreaker when the two packets arrived at the same cell are both 0-bound or both 1-bound.--.

Page 212, line 18 has been amended as follows: --super-stage. Note that if $\gamma(p) = \gamma(q)$ in the guide of the network, where $p<q$, the q-th symbol of the routing tag $Q_{\gamma(q)}$ will repeat the p-th symbol $Q_{\gamma(p)}$, when $Q_{\gamma(p)} = Q_{\gamma(q)}$ = 'bicast', the packet may be bicasted at stage-p and then be bicasted again at stage-q such that undesired extra copies of the packet will be produced. Therefore, whenever $\gamma(p) = \gamma(q)$ in the guide of the network, the bicasting function of the whole stage of switching nodes at either stage-p or stage-q should be disabled to prevent such situation. The remaining parts of the control coincide with the above.--.

Page 226, the following lines have been inserted after line 5: --For example, for a $2^6 \times 2^6$ banyan-type network with the guide being 5, 4, 6, 1, 3, 2, if the destination addresses of a multicast packet in this network comprise 001010 (address 1), 011001 (address 2) and 110101 (address 3), for address 1 where $d_1d_2d_3d_4d_5d_6 = 001010$, that is, $d_1=0$, $d_2=0$, $d_3=1$, $d_4=0$, $d_5=1$, and $d_6=0$, then $d_{\gamma(1)}d_{\gamma(2)}d_{\gamma(3)}d_{\gamma(4)}d_{\gamma(5)}d_{\gamma(6)} = d_5d_4d_6d_1d_3d_2 = 100010$ is a guiding sequence of this packet; for address 2 where $d_1d_2d_3d_4d_5d_6 = 011001$, $d_{\gamma(1)}d_{\gamma(2)}d_{\gamma(3)}d_{\gamma(4)}d_{\gamma(5)}d_{\gamma(6)} = d_5d_4d_6d_1d_3d_2 = 001011$ is also a guiding sequence of this

packet; for address 3 where $d_1d_2d_3d_4d_5d_6 = 110101$, $d_5d_4d_6d_1d_3d_2 = 011101$ is another guiding sequence of this packet.--.

Page 226, line 17 has been amended as follows: --associated with longer strings. ~~When two~~ Among symbols ~~are~~ associated with equally long strings,--.

Page 227, lines 3-4 have been amended as follows: --sequence $\gamma(1), \gamma(2), \ldots, \gamma(n)$. By definition, $d_{\gamma(1)}d_{\gamma(2)}\ldots d_{\gamma(n)}$ is a guiding sequence of ~~that~~ a packet when the destination addresses of ~~a~~ that packet include the address $d_1d_2\ldots d_n$. The--.

Page 227, line 13 has been amended as follows: --leading quaternary symbol of one of the two ~~a~~ packets arrived at the bicast cell is 'bicast' and that of the other packet is 'idle', then--.

Page 227, line 17 has been amended as follows: --describes the switching control over a single bicast cell. Meanwhile, in accordance with the present invention, there is also the--.

Page 228, lines 13-14 have been amended as follows: --quaternary symbol starting with the second real symbol in the routing tag, while a packet routed to output-1 of a stage-j cell retains only every other real quaternary symbol starting with the--.

Page 228, lines 15-16 have been amended as follows: --~~second~~ third real symbol in the routing tag. ~~(~~Note that space fillers are not regarded as real quaternary symbols.~~)~~ Again, space fillers replace those non-retained symbols in order to maintain the--.

Page 229, line 13 has been amended as follows: --101, and 111, of an 8×8 banyan network (**7600**). The coding of the destination addresses--.

Page 229, line 15 has been amended as follows: --follows. The quaternary symbols '0-bound', '1-bound', 'idle', and ~~bi-cast~~ 'bicast' are abbreviated as 0,--.

Page 230, line 1 has been amended as follows: --the first packet are 000 and 011, and ~~that~~ those for the second packet are 010, 100, 101, and 111.--.

Page 230, line 2 has been amended as follows: --For the first packet, the first symbol $Q_{\sim}$ =in the routing tag is 0 because, according to the rules of the--.

Page 230, line 5 has been amended as follows: --but S1 = "1" is not a prefix of any guiding sequences of the first packet, the condition for the case Q_S =--.

Page 230, line 12 has been amended as follows: --its leading symbol is "0" and the other input of the cell is idle, the cell sets its connection--.

Page 231, lines 1-2 have been amended as follows: --the output-0 retains every other real quaternary symbol starting with the second real symbol ~~which is "0"~~ in the routing tag "B□0□1□" **(7612)**, "0", and thus gives the new routing tag "0□□□" **(7613)**, while the copy of the packet at the output-1 retains every other real quaternary symbol starting with the third real symbol ~~which is "1"~~ in the routing tag "B□0□1□" **(7612)**, "1", and thus gives the new routing tag "1□□□"--.

Page 232, line 1 has been amended as follows: --Section F) associated with the n-leaf rightist tree. Take the ~~final~~ first recursive step in such a--.

Page 233, line 9 has been amended as follows: --converted into a ~~the~~ construction of a self-routing switch that is "nonblocking in the--.

Page 233, line 17 has been amended as follows: --multicast mechanism toward an arbitrary set of output addresses as described in the sub-section J1 is ported--.